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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,729	08/19/2003	Richard J. Hickey JR.	505/1	4684

24101 7590 08/29/2007  
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EXAMINER
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ETTEHADIEH, ASLAN

ART UNIT	PAPER NUMBER
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2611

NOTIFICATION DATE	DELIVERY MODE
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08/29/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

bruce@lilling.com  
sean@lilling.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/643,729	<b>Applicant(s)</b> HICKEY, RICHARD J.	
	<b>Examiner</b> Aslan Ettehadieh	<b>Art Unit</b> 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 70-72 is/are pending in the application.
- 4a) Of the above claim(s) 1-69 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 70-72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of claims 70 – 72 in the reply filed on 07/09/2007 is acknowledged.

***NOTE***

2. Please note that all references made herein to the instant application are made with respect to paragraphs of U.S. Patent Application Publication No. 2005/0043893, the publication corresponding to the instant application.
3. Examiner has relied on "IEEE 100, The Authoritative Dictionary of IEEE Standards Terms" Seventh Edition, IEEE Press Publication, 2000, p513 to define the term heuristic.

***Specification***

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Objections***

6. Claim 70 is objected to because of the following informalities: please replace no with on, to correct typographical error. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 70 – 72 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
8. Regarding claims 70 – 72, the claims are indefinite because the terms Y, N, and n are not defined. Are they integers,  $> 1$ ,  $\geq 1$ , etc. The limitations can be interpreted as  $Y = 0$ ,  $N = 0$ ,  $n = 0$ ,  $Y = 1$ ,  $N = 1$ ,  $n = 1$ ; where would make the claim further indefinite because the limitations would not need to occur.
9. Claim 70 recites the limitation "the general probabilities". There is insufficient antecedent basis for this limitation in the claim. Does applicant mean "a general probabilities".
10. Claim 70 recites the limitation " the probabilities". There is insufficient antecedent basis for this limitation in the claim. Does applicant mean "probabilities", "the general probabilities", etc.
11. Claim 71 recites the limitation " the match values". There is insufficient antecedent basis for this limitation in the claim. Does applicant mean "a match values", "match values", etc.

***Claim Rejections - 35 USC § 101***

12. Claims 70 – 72 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 70 – 72 consists solely of mathematical operations without some claimed practical application. Also, if

determining likelihood is a practical application of the claimed invention, please define how determining likelihood is a practical application and please show where exactly the specification supports determining likelihood is a practical application. Examiner does see the support for the practical application for the other claims sets were data reduction however does not see that as the practical application for this invention. See Benson, 409 U.S. at 71-72, 175 USPQ at 676.

### ***Drawings***

13. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, all limitations of claims 70 – 72 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New

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Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claim 70 is rejected under 35 U.S.C. 102(b) as being anticipated by Ellis et al. (US 5621454), which is applicant's own admitted prior art.

15. Regarding claim 70, Ellis discloses a method for determining likelihood of a match between a first set of data having Y of N bits set equal to a first binary value and a remainder of the bits set equal to a second binary value, and a second set of data also having Y of N bits set equal to a first binary value and a remainder of the bits set equal to a second binary value, the method comprising: determining the general probabilities of Y of N bits in said first set of data and in said second set of data being the same; and heuristically processing the probabilities to produce a series of match values based on the number of respective bits in the first set of data and in the second set of data that are identical (col. 47 line 5 – col. 48 line 9).

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aslan Ettehadieh whose telephone number is (571) 272-8729. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aslan Ettehadieh  
Examiner  
Art Unit 2611

AE

  
DAVID C. PAYNE  
SUPERVISORY PATENT EXAMINER